Advanced Java Programming

Week 3 Topic Outline

Abstract Classes and Interfaces

1. Abstract vs. concrete classes
2. Abstract methods and classes
3. Interfaces and can-do relationships

    a. The interface contract
    b. Programming to an interface, not an implementation

4. Favor composition over inheritance

Javadoc Documentation

1. Javadoc lets us view the "interface" for a class
2. Preconditions and post-conditions
3. Javadoc comments
4. `@author`, `@version`, `@param`, `@return`, `@throws`
5. Generating documentation with the `javadoc` tool
6. Google "javadoc tutorial" for more information

Packages

1. Java's package system

    a. Correspondance to file system
    b. Non-hierarchical package names

2. Importing classes

    a. Importing by name
    b. Wildcard importing
    c. The `java.lang` package

3. Referring to objects by package name
4. Importing static members

The Java API

1. Navigating the API
2. The `StringBuilder` class
3. Wrapper classes
4. The `ArrayList` class